

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A *C. albicans* cell containing a vector in which a nucleic acid molecule which encodes a cell wall protein necessary for the hyphae development of a pathogenic fungal organism is arranged in antisense orientation to at least one regulation ~~elements~~ element and is selected from the group consisting of:
 - a) a nucleic acid molecule having ~~a one of the~~ nucleotide sequences shown in sequence selected from the group consisting of SEQ ID No. 1, SEQ ID No. 3 and [[or]] SEQ ID No. 5,
 - b) a nucleic acid molecule having a nucleotide sequence which encodes a protein having ~~an one of the~~ amino acid sequences shown in sequence selected from the group consisting of SEQ ID No. 2, SEQ ID No. 4 and [[or]] SEQ ID No. 6,
 - c) a nucleic acid molecule having a nucleotide sequence which shows a homology of at least 80% to a nucleotide sequence of one of the nucleic acid molecules of a) or b) over its entire length, and
 - d) a nucleic acid molecule having a nucleotide sequence which is complementary to a nucleotide sequence of one of the nucleic acid molecules of a) to c), and
 - e) a fragment of a nucleic acid molecule defined in a) to d) which can inhibit the expression of a cell wall protein of a pathogenic fungal organism in antisense orientation to a promoter in a host cell and which comprises at least 10 nucleotides.

2. (Currently Amended) A method for the production of a cell wall protein necessary for the hyphae development of a pathogenic fungal organism, said method comprising [[the]] culturing [[of]] a host cell in a suitable culture medium under conditions which allow expression of the cell wall protein, and obtaining the obtainment of the expressed cell wall protein from the cell

or from the medium, wherein the host cell contains at least one vector in which the nucleic acid molecule defined in claim 1 is arranged in antisense orientation to at least one regulation element.

3. (Currently Amended) An antibody which specifically recognizes a protein and binds thereto, wherein the protein contains an [[the]] amino acid sequence selected from the group consisting of SEQ ID No. 2, SEQ ID No. 4 and SEQ ID No. 6.

4. (Currently Amended) The antibody as claimed in claim 3, wherein the antibody is being a monoclonal or a polyclonal antibody.

5. (Currently Amended) A method for at least one of the characterization of and/or for and the detection of the hyphae stage of *Candida* cells or cells of pathogenic fungal organisms of a *Trichosporon* species or of a *Blastoschizomyces* species, the method comprising the incubation of the cells or cell fractions thereof with an agent for the identification of a cell wall protein which contains the amino acid sequence selected from the group consisting of SEQ ID No. 2, SEQ ID No. 4 and SEQ ID No. 6, wherein the detection of the protein or of a fragment thereof indicates indicating the presence of the virulent hyphae stage of the cells.

6. (Currently Amended) The method as claimed in claim 5, wherein the *Candida* cells to be characterized are selected from the group consisting of being cells of *C. albicans*, *C. tropicalis*, *C. krusei*, *C. parapsilosis*, *C. guilliermondii*, *C. glabrata*, *C. dubliniensis* [[or]] and *C. lusitaniae*.

7. (Currently Amended) The method as claimed in claim 5 or 6, wherein the cells to be characterized are being present in a biological sample.

8. (Currently Amended) The method as claimed in claim 5 one of claims 5 to 7, wherein the cells to be characterized are being cells isolated from a biological sample and enriched intact cells.

9. (Currently Amended) The method as claimed in claim 5 one of claims 5 to 8, wherein isolated cell fractions are being employed for the characterization, wherein said fragments which are

obtained obtainable by cell disruption and fractionation of *Candida* cells or cells of species related to *Candida* and which comprise at least one cell wall fraction.

[[9.]] 10. (Currently Amended) The method as claimed in claim 5 one of claims 5 to 9, wherein the agent employed for the identification of the protein is being an immunological agent.

[[10.]] 11. (Currently Amended) The method as claimed in claim 10 claim 9, wherein the immunological agent is selected from the group consisting of being an antiserum directed against the protein, an antibody which specifically recognizes a protein and binds thereto, wherein the protein contains an amino acid sequence selected from the group consisting of SEQ ID No: 2, SEQ ID No: 4 and SEQ ID No: 6, as claimed in claim 3 or 4 or a fragment thereof [[or]] and a complex thereof.

[[11.]] 12. (Currently Amended) The method as claimed in claim 11 claim 10, wherein the antibody has having a label selected from the group consisting of a dye label, a radiolabel, a fluorescent label, a chemiluminescent label [[or]] and an enzyme inducing a measurable reaction.

[[12.]] 13. (Currently Amended) A method for at least one of the detection of a *Candida* infection and and/or of an infection by pathogenic fungal organisms of a *Trichosporon* species or of a *Blastoschizomyces* species in a biological sample obtained from a human or animal organism, wherein the presence of at least one the protein selected from the group consisting of Rbr1p, Rbr2p and and/or Rbr3p and/or and [[of]] a fragment thereof in at least one of the biological sample and and/or in the cell wall of *Candida* cells or cells of pathogenic fungal organisms of a *Trichosporon* species or of a *Blastoschizomyces* species optionally contained in the biological sample is being detected, the method comprising

a) incubating the incubation of the biological sample with an agent for the identification of the cell wall protein which contains [[the]] an amino acid sequence selected from the group consisting of SEQ ID No. 2, SEQ ID No. 4 and SEQ ID No. 6, and

b) detecting the detection of the interaction of the identification means with the protein.

[[13.]] 14. (Currently Amended) The method as claimed in claim 13 ~~claim 12~~, wherein the *Candida* cells are being cells selected from the group consisting of *C. albicans*, *C. tropicalis*, *C. krusei*, *C. parapsilosis*, *C. guilliermondii*, *C. glabrata*, *C. dubliniensis* and [[or]] *C. lusitaniae*.

[[14.]] 15. (Currently Amended) The method as claimed in claim 13 ~~claim 12 or 13~~, wherein the biological sample is selected from the group consisting of being a skin or mucous membrane swab, an organ biopsy, a tissue biopsy, a body fluid, a body secretion, stool and [[or]] a rinse from a cavity cavities or a hollow organ organs.

[[15.]] 16. (Currently Amended) The method as claimed in claim 15 ~~claim 14~~, wherein the body fluid is selected from the group consisting of being sputum, urine, pleural effusion, spinal fluid, lymph [[or]] and blood.

[[16.]] 17. (Currently Amended) The method as claimed in claim 16 ~~claim 15~~, wherein the blood is being present as an unpurified blood sample, blood plasma or blood serum.

[[17.]] 18. (Currently Amended) The method as claimed in claim 16 ~~claim 15 or 16~~, wherein invasive candidiasis is being detected by the detection of the protein in blood or in the cell wall of *Candida* cells contained in the blood.

[[18.]] 19. (Currently Amended) The method as claimed in claim 13 ~~one of claims 12 to 17~~, wherein the agent employed for the identification of the protein is being an immunological agent.

[[19.]] 20. (Currently Amended) The method as claimed in claim 19 ~~claim 18~~, wherein the immunological agent is selected from the group consisting of being an antiserum directed against the protein, an antibody which specifically recognizes a protein and binds thereto, wherein the protein contains an amino acid sequence selected from the group consisting of SEQ ID No: 2, SEQ ID No: 4 and SEQ ID No: 6, as claimed in claim 3 or 4 or a fragment thereof and [[or]] a complex

thereof.

[[20.]] 21. (Currently Amended) The method as claimed in claim 19 ~~claim 18 or 19~~, wherein the antibody has having a label selected from the group consisting of a dye label, a radiolabel, a fluorescent label, a chemiluminescent label and [[or]] an enzyme inducing a measurable reaction.

[[21.]] 22. (Currently Amended) A method for the discovery and identification of substances having therapeutic action against diseases which are caused by *Candida* species or pathogenic fungal *Trichosporon* or *Blastoschizomyces* species, wherein a substance to be tested is being brought into contact in a suitable medium with at least one agent and an interaction between the substance to be tested and the agent is being detected, and wherein the agent is being selected from the group consisting of:

a nucleic acid molecule which encodes a cell wall protein necessary for the hyphae development of a pathogenic fungal organism and which is selected from the group consisting of:

- a) a nucleic acid molecule having one of the nucleotide sequences selected from the group consisting of shown in SEQ ID No. 1, SEQ ID No. 3 and [[or]] SEQ ID No. 5,
- b) a nucleic acid molecule having a nucleotide sequence which encodes a protein having an one of the amino acid sequence selected from the group consisting of sequences shown in SEQ ID No. 2, SEQ ID No. 4 and [[or]] SEQ ID No. 6,
- c) a nucleic acid molecule having a nucleotide sequence which shows a homology of at least 80% to a nucleotide sequence of one of the nucleic acid molecules of a) or b) over its entire length,
- d) a nucleic acid molecule having a nucleotide sequence which is complementary to a nucleotide sequence of one of the nucleic acid molecules of a) to c), and
- e) a fragment of a nucleic acid molecule defined in a) to d) which can inhibit the expression

of a cell wall protein of a pathogenic fungal organism in antisense orientation to a promoter in a host cell and which comprises at least 10 nucleotides,

a vector which contains a nucleic acid molecule,

a host cell which contains the vector,

a protein which contains an amino acid sequence selected from the group consisting of SEQ ID No. 2, SEQ ID No. 4 and SEQ ID No. 6, and

an antibody which specifically recognizes the protein and binds thereto.

[[22.]] 23. (Currently Amended) A diagnostic composition comprising an agent identified characterized according to the method of [[in]] claim 22 claim 21.

[[23.]] 24. (Currently Amended) A pharmaceutical composition comprising an agent identified characterized according to the method of [[in]] claim 22 claim 21.

[[24.]] 25. (Currently Amended) A [[The]] pharmaceutical composition as claimed in claim 23, in the form of it being a vaccine which contains a protein identified characterized [[in]] according to the method of claim 22 claim 21 and which is suitable for the active immunization of a human or animal body against a *Candida* infection.

[[25.]] 26. (Currently Amended) A [[The]] pharmaceutical composition in the form of as claimed in claim 23, it being a vaccine which contains an antibody identified characterized according to the method of [[in]] claim 22 claim 21 and which is suitable for the passive immunization of a human or animal body against a *Candida* infection.

[[26.]] 27. (Currently Amended) The pharmaceutical composition as claimed in claim 25 claim 24 or 25, wherein the vaccine is being present as a lyophilizate.

[[27.]] 28. (Currently Amended) The pharmaceutical composition as claimed in claim 25 ~~claim 24 or 25~~, wherein the vaccine is being present as an aqueous colloidal solution or suspension.

[[28.]] 29. (Currently Amended) The pharmaceutical composition as claimed in claim 25 ~~one of claims 24 to 27~~, additionally containing at least one adjuvant.

[[29.]] 30. (Currently Amended) A kit for the in vitro identification of at least one of a ~~[[the]]~~ cell wall protein selected from the group consisting of Rbr1p, Rbr2p and ~~and/or~~ Rbr3p of *Candida* species, ~~or of~~ a pathogenic organism of a *Trichosporon* species, ~~or of~~ a *Blastoschizomyces* species and/or for the in vitro detection of the virulence of the cells, said kit comprising at least one container containing having an antibody as claimed in claim 3 ~~or 4~~.

[[30.]] 31. (Currently Amended) The kit as claimed in claim 30 ~~claim 29~~, comprising a second container containing having the isolated and purified protein comprising an ~~having~~ one of the amino acid sequence selected from the group consisting of shown in SEQ ID No. 2, SEQ ID No. 4 and [[or]] SEQ ID No. 6.

[[31.]] 32. (Currently Amended) A method ~~The use of an agent characterized in claim 21~~ for the diagnosis of diseases of a human or animal organism which are caused by *Candida* species or pathogenic fungal organisms of a *Trichosporon* species or of a *Blastoschizomyces* species which comprises administering to said organism an agent identified by the method of claim 22.

[[32.]] 33. (Currently Amended) A method ~~The use of an agent characterized in claim 21~~ for the production of a diagnostic composition for the diagnosis of diseases of a human or animal organism which are caused by *Candida* species or pathogenic fungal organisms of a *Trichosporon* species or of a *Blastoschizomyces* species wherein the method comprises incorporating into said diagnostic composition a therapeutic substance identified by the method of claim 22.

[[33.]] 34. (Currently Amended) A method ~~The use of an agent characterized in claim 21 as an active compound for at least one of~~ the treatment and ~~and/or~~ prevention of diseases of a human or animal organism which are caused by *Candida* species or pathogenic fungal organisms of

a *Trichosporon* species or of a *Blastoschizomyces* species, which method comprises administering to an organism in need thereof a composition compressing, as an active material, a substance identified by the method of claim 22.

[[34.]] 35. (Currently Amended) A method The use of an agent characterized in claim 21 as an active compound for the production of a pharmaceutical composition for at least one of the treatment and and/or prevention of diseases of a human or animal organism which are caused by *Candida* species or pathogenic fungal organisms of a *Trichosporon* species or of a *Blastoschizomyces* species, which method comprises including within said pharmaceutical composition a substance identified by the method of claim 22.

[[35.]] 36. (Currently Amended) A method The use of an agent characterized in claim 21 for at least one of the identification and and/or for the detection of a substance substances which inhibit the expression or activity of the Rbr1p protein in a pathogenic fungal organism and are suitable as an active compound for the production of a pharmaceutical composition for the control of complaints caused by *Candida* species wherein said substance is identified or detected with the use of a material identified by the method of claim 22.

[[36.]] 37. (Currently Amended) A method The use of a nucleic acid molecule having one of the nucleotide sequences shown in SEQ ID No. 1, SEQ ID No. 3 or SEQ ID No. 5, of a nucleic acid molecule having a nucleotide sequence which encodes a protein having one of the amino acid sequences shown in SEQ ID No. 2, SEQ ID No. 4 or SEQ ID No. 6, or of a fragment thereof for the isolation of a homologous nucleic acid which encodes at least one of the Rbr1p protein, the Rbr2p protein and the [[or]] Rbr3p protein of at least one selected from the group consisting of *C. tropicalis*, *C. krusei*, *C. parapsilosis*, *C. guilliermondii*, *C. glabrata*, *C. dubliniensis*, and *C. lusitaniae*, of a *Trichosporon* species, [[of]] a *Blastoschizomyces* species or of another fungal pathogenic organism, wherein said method involves the use of at least one selected from the group consisting of a nucleic acid molecule having one of the nucleotide sequences selected from SEQ ID No:1, SEQ ID No: 3 and SEQ ID No: 5, a nucleic acid molecule having a nucleotide sequence which encodes a protein having one of the amino acid sequences selected from the group consisting of SEQ ID No: 2, SEQ ID No: 4 and SEQ ID No: 6, and a fragment thereof.

[[37.]] 38. (Currently Amended) A method ~~The use of an antibody as claimed in claim 3 or 4 for at least one of the characterization and and/or for the detection of the virulent hyphae stage of *Candida* cells, wherein said method involves the use of an antibody according to claim 3.~~